

## ABSTRACT

A method is presented for optical control of the quality of a process of  
5 chemical mechanical planarization (CMP) performed by a polishing tool applied to  
an article having a patterned area. The article contains a plurality of stacks each  
formed by a plurality of different layers, thereby defining a pattern in the form of  
spaced-apart metal regions. The method is capable of locating at least one of  
residues, erosion and dishing conditions on the article. At least one predetermined  
10 site on the article is selected for control. This at least one predetermined site is  
illuminated, and spectral characteristics of light components reflected from this  
location are detected. Data representative of the detected light components is  
analyzed for determining at least one parameter of the article within the at least one  
illuminated site.